

The Examiner has rejected claims 1-4, 10, 11 and 14 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 3,285,247 to Morin, the Examiner stating that "Morin discloses a bra 10 with a pair of multilayered breast cups 12 joined by a central band 16 and with a surrounding band 14 wherein the cups include an intermediate foam layer 12 ... Morin discloses the outer shell layer 30, an inner lining layer 32 and an artificial nipple 24.

Claim 14 recites that an outer shell layer is formed and thereafter a nipple recess is filled with an artificial nipple forming liquid. Morin does not disclose or suggest that the artificial nipple element is formed from a liquid after the formation of the outer shell layer. Since Morin does not disclose each and every element of the claimed invention, Morin can not anticipate the claimed invention. Accordingly, withdrawal of the rejection of claims 1-4, 10 and 14 under 35 U.S.C. §102(b) as being anticipated Morin is respectfully requested.

The Examiner has rejected claims 5, 6 and 17 under 35 U.S.C. §103(a) as being unpatentable over Morin in view of U.S. Patent 2,727,278 to Thompson, the Examiner stating that Thompson teaches that the foam layer 13 is integrally molded with a nipple. Applicant respectfully disagrees with the Examiner. Thompson discloses a foam rubber breast pad formed from a rubber latex foam, vinyl foam or an other foamed rubber like material which fills. The form used to create the foam rubber breast pad includes a nipple protrusion which is filled with the same foam used to create the foam rubber breast pad. However, this nipple protrusion is not a separate, unique nipple element. Rather, it simply is a part of the form.

In the present invention, the artificial nipple element is created and integrated with the outer shell layer after the outer shell layer has been formed. The Examiner's attention is directed to paragraph [0031] of the instant application which describes the formation of the integrated artificial layer as follows: "Once the outer shell layer is formed and cooled, the nipple recess **215** is filled with a liquid which is capable of hardening and adhering to the outer shell layer, thereby forming an artificial nipple **240**. Suitable examples of such a liquid are liquid rubber and silicone rubber."

Thompson does not teach or even suggest the creation of an artificial nipple element after formation of the foam rubber breast pad. Nor does Thompson teach or even suggest forming an outer shell having a recess into which a liquid is poured which hardens and adheres to the outer shell layer. Accordingly, it is respectfully submitted that the rejection of claims 5, 6, and 17 under 35 U.S.C. §103(a) as being unpatentable over Morin in view of Thompson fails to disclose the claimed

invention and withdrawal of this rejection is respectfully requested.

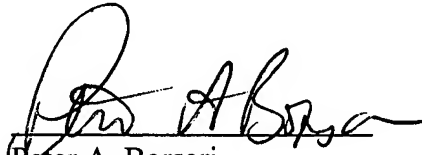
The Examiner has rejected the remaining claims under 35 U.S.C. §103(a) as being unpatentable over Morin in view of the J.C. Penney Catalog reference. Since the combination of Morin and Thompson fails to teach the claimed invention, and since the J.C. Penny Catalog reference does not disclose an artificial nipple element integrally molded with an outer shell, it is respectfully submitted that the rejection of claims 7, 9, 12, 15 and 16 as being unpatentable under 35 U.S.C. §103(a) as being unpatentable over Morin in view of J.C. Penney fails to disclose the claimed invention. Accordingly, withdrawal of this rejection is respectfully requested.

Based on the foregoing, it is believed that the claims 14 to 17 are in condition for allowance and such action is respectfully requested.

Submitted concurrently herewith is a Petition For A Three Month Extension Of Time, up to and including September 22, 2004.

If the Examiner has any questions regarding this response, he is asked to contact the Applicant's attorney at (302) 227-2364.

Respectfully submitted,



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26 also assists in situating the foam enhancing layer 20 in a proper position behind the outer shell layer 10.

[0025] Because the intermediate foam enhancing layer is adapted to present the idealized bustline through the wearer's clothing, the inherent rigidity of the fabric material should be considered as the overall breast cup must be rigid enough to provide the desired contour but supple enough to have a "natural" appearance. Consideration also should be given to the ability of the selected fabric to hold and present these idealized shapes after repeated wearing and laundering. Preferably, the foam enhancing layer 20 is in the form of a thin layer of foam. The thin layer of foam should be of a material which is sufficiently durable to withstand normal wear-and-tear, capable of wicking perspiration and which also is comfortable for the average wearer. The thin layer of foam also should be capable of retaining its shape after washing. Preferably, the thin layer of foam is composed of a hypoallergenic material. Suitable materials of the thin layer of foam include for example, polyester, polyurethane, ethylene vinyl acetate copolymer and polyethylene foams. A preferred material for the thin layer of foam used in the foam enhancing layer 20 is polyurethane. The foam enhancing layer 20 should be designed with a thickness sufficient to provide comfort to the wearer. The thickness at the upper breast slant 21 should be in the range of from about 1.0 to about 3.0 mm; thickness at the artificial nipple protrusion 26 should be in the range of from about 1.0 to about 1.3 cm; thickness at the lower breast convex curve 22 depends on the desired amount of lift and can be in the range of from about 1.0 mm to about 2.5 cm.

[0026] The intermediate foam enhancing layer 20 serves as a further cushioning and wicking layer between the inner lining layer 30 and the outer shell layer 10. The inclusion of the foam enhancing layer 20 offers an additional degree of comfort to the female wearer whose natural endowments may require some deformation in order to wear the brassiere. For example, in the instance of a woman having large or pendulous breasts, the padding serves to provide a comfortable support, whereas in the instance of a woman having relatively smaller breasts, the inherent rigidity of the brassiere materials provides an enhanced contour independently, requiring no support from the natural breast tissue. Because a woman's breasts may vary dramatically in shape, size and aspect from those of the idealized form

presented by the intermediate layer 20, both the foam enhancing layer 20 and the inner lining layer 30 serve to comfortably contain and support the natural breast tissue which may be impinged upon by the breast cups 2.

[0027] The outer shell layer 10 is composed of a material that will readily conform to the shape of the intermediate foam enhancing layer 20. To achieve such conformity, the outer shell layer is composed of a soft stretch knit fabric, capable of stretching (molding) around the foam enhancing layer 20 and taking on the shape of the foam enhancing layer 20. Preferably, the outer shell layer is fabricated from a durable man-made fiber material, suitable examples of which include knit fabrics, nylon, nylon with spandex, polyester knits and polyester knits with spandex. The addition of spandex allows the outer layer to assume the shape of the intermediate layer 20, including the nipple area. In the instance where a non-spandex knit is used, the fabric should be stretched and heat-set into shape that forms around the intermediate layer.

[0028] The inner lining layer 30 also is configured to have a shape complementary to the intermediate foam enhancing layer 20. As the inner lining layer lies next to the wearer's skin, it should be composed of a material which provides comfort to the wearer and also is adapted to wick perspiration. Suitable examples of the inner lining layer include nylon, soft cotton and silk. The three layers, that is, the outer shell layer 10, the foam enhancing layer 20 and the inner lining layer 30, are permanently joined to one another, such as through sewing, to form the single multi-layered breast cup 2.

[0029] Referring now to Figures 3 and 3A, a second embodiment of the natural shape enhancing brassiere of the present invention is shown. In this embodiment, each breast cup 2 is in the form of a multi-layered structure comprising an outer shell layer 110, an intermediate foam padding layer 120, a padded inner lining layer 130, and an artificial nipple 140. As in embodiment shown in Figures 2 and 2A, the foam padding layer 120 comprises an upper breast slant 121 and a lower breast convex curve 122 and can be composed of the same materials as intermediate foam enhancing layer 20.

[0030] The intermediate foam padding layer 120 is provided with an aperture 127 adapted to receive the protruding end 141 of the artificial nipple 140. Suitable materials for use as the intermediate foam padding layer include for example, polyester, polyurethane, ethylene

vinyl acetate and polyethylene foams.

[0031] The padded inner lining layer 130 also is configured to have a shape complementary to the foam padding layer 120. Preferably, the padded inner lining layer 130 is in the form of a thin layer of foam fused to a lining fabric. The thin layer of foam should be of a material which is sufficiently durable to withstand normal wear-and-tear, capable of wicking perspiration and which also is comfortable for the average wearer. In addition, the padded inner lining layer is adapted to obscure the contour of the inner part of the artificial nipple 140 such that it is not felt by the wearer. Preferably, either or both the thin layer of foam and the lining fabric are composed of a hypoallergenic material. Suitable materials of the thin layer of foam include for example, polyester, polyurethane, ethylene vinyl acetate and polyethylene foams. A preferred material for the thin layer of foam used in the padded inner lining layer 130 is polyurethane foam. The thin layer of foam material should have a thickness in the range of from about 1.0 to about 2.0 mm. Suitable materials for the lining fabric include for example, nylon, silk and soft cotton.

[0032] The artificial nipple 140 includes a protruding end 141 and is formed to emulate the idealized form of a female nipple, thereby enhancing the appearance of the bustline. The protruding end 141 of the artificial nipple 140 extends through aperture 127 disposed within the intermediate foam padding layer 120. The artificial nipple 140 can be composed of any material which is compressible under normal finger pressure, such as a soft rubber material. Suitable rubber materials include for example, silicone rubber and latex rubber, and natural rubber.

[0033] Referring now to Figures 4 and 4A, a third embodiment of the natural shape enhancing brassiere of the present invention is shown. In this embodiment, each breast cup 2 comprises an outer shell layer 210 and an inner lining layer 220. The outer shell layer 210 comprises an idealized upper breast slant 211, a desirable lower breast convex curve 212 and a protruding nipple contour 214 which forms a nipple recess 215. The outer shell layer 210 should be constructed from a material which is moldable when heated and will retain its shape after cooling, a suitable example of which is a polyester. Once the outer shell layer is formed and cooled, the nipple recess 215 is filled with a liquid which is capable of hardening and adhering to the outer shell layer, thereby forming an artificial nipple 240. Suitable

examples of such a liquid are liquid rubber and liquid silicone rubber. The inner lining layer 220 should be adapted to wick perspiration and provide comfort for the wearer and can be composed of the same materials as inner lining layer 20.

[0034] While particular embodiments of the invention have been described, it will be understood, of course, that the invention is not limited thereto, and that many obvious modifications and variations can be made, and that such modifications and variations are intended to fall within the scope of the appended claims.